

PROKES, VLADIMIR

SCHOBER, Bruno, PROKES, Vladimir

Evaporated carbon films for electron microscopy. Cesk.biol.4  
no.7:435-436 Ji '55.

1. Ustav lekarske fyziky Palackeho university, Olomouc a Fysi-  
kalni ustav vysoke školy stavitelství, Brno.

(MICROSCOPY, ELECTRON, apparatus and instruments,  
evaporated carbon films)

(PHOTOGRAPHY, apparatus and instruments,  
evaporated carbon films for electron microscopy)

PROCES, W.

CHEN, A., JR.; CHEN, H.; CHEN, H.; CHEN, W., JR.; CHEN, C., JR.

Index with hard drilling technique. Gesk. roentg. 11 no.1:62-69

1. Izvješće o ustav Brno, reditel' doc. Dr J. Šerádníček, Fyz. ustav  
vysokého školství v Brně, Brno Ustav rta: oddelení Statist. fakultni  
na č. 1. Brno, vpravek: Mgr. J. Šerádníček.

[illegible][illegible]

(LUNGS; radiography

hard filming volume (Cz)

CAHA, A., Dr.; DOLEZEL, M., Dr.; PROKES, V., Dr.

Dosimetry by means of solid substances. Cesk. rentg. 12 no.2:114-120  
June 58.

1. Onkologický ústav Brno, red. doc. Dr. J. Sprindrich Fyzikální ústav  
přirodovědecké fakulty MU, Brno. A. C., Brno, Zluty kopec 7.

(ROENTGEN RAYS,

dosimetry by means of diamonds (Cz))

(CARBON,

diamonds, use in dosimetry of x-rays (Cz))

GRAMENITSKIY, I.M.; IVANOVSKAYA, I.A.; KANAREK, Y.; GRIGOR'YEV, I.S.;  
PROKESH, A.; TIKHONOVA, L.A.

Study of the reaction  $\pi^+ + Xe \rightarrow \pi^+ + \gamma^0 + Xe$  involving 9 GeV/c  
primary  $\pi^-$ -mesons. Zhur.eksp.i teor.fiz. 46 no.6:2023-2027 Je  
'64.

Ob'yedinennyy institut yadernykh issledovaniy.

(MIRA 17:10)

GRAMENITSKIY, I.M.; KANAREK, T.; MAL'TSEV, V.M.; PROKESH, A.; TIKHONOVA, L.A.

Quasi-elastic  $\pi^-n$ -interaction at an energy of 9Bev. IAd. fiz. 1 no.1:  
113-121 Ja '65. (MIRA 18:7)

1. Ob'yedinennyy institut yadernykh issledovaniy.

IVANOVSKAYA, I.A.; KUZNETSOV, Ye.V.; PROKESH, A.; CHUVILO, I.V.

Cross polarization of  $\Lambda$ -hyperons generated by  $\pi^-$ -mesons  
with a pulse of 2,8 BeV/c on xenon nuclei. Zhur. eksp.  
i teor. fiz. 40 no.2:708-709 F '61. (MIRA 14:7)

1. Ob"yedinennyy institut yadernykh issledovaniy i Institut  
teoreticheskoy i eksperimental'noy fiziki AN SSSR.  
(Mesons)

L 10286-63

EPF(c)/EMP(q)/EST(m)/HDS--AFPTC/ASD--Pr-4--JD

ACCESSION NR: AP3000034

8/0056/63/044/005/1456/1462

AUTHOR: Ivanovskaya, I. A.; Kuznetsov, Ye. V.; Prokesh, A.; Chuvilo, I. V.

TITLE: Production of strange particles by 2.8 BeV/c negative pions on xenon  
nuclei

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 44, no. 5, 1963, 1456-1462

TOPIC TAGS: Strange particles, production cross sections, negative pions,  
LAMBDA hyperons, neutral Kaons, xenon and freon

ABSTRACT: The relative and absolute cross sections were measured for the different channels of production of strange particles, mainly LAMBDA hyperons and neutral Kaons, by 2.8-BeV negative pions in a xenon bubble chamber. The angular and momentum distributions of these particles are also presented. Both direct particle production and production via short-lived intermediate particles are included. The experiment was described in detail in a separate article by the authors (Zhurnal eksperimental'noy i teoreticheskoy fiziki, vol. 43, 765, 1962). The cross section measurement results are tabulated (Enclosure 1). It

Card 1/3

L 10286-63

ACCESSION NR: AP3000034

2

is concluded that reactions differing only with regard to the charge of strange particles occur with identical intensity. The experimental cross section ratios are in good agreement with Fermi-model calculations for some cases, and 1.5 times smaller in others. The bulk of the LAMBDA hyperons are emitted backward within a  $154-180^\circ$  cone in the pion-nucleon center of mass system. The angular distributions depend only slightly on the strange-particle charge. About 30% of the LAMBDA hyperons are scattered in the parent nucleus. Comparison of the data on the neutral Kaon-Antikaon pairs produced in freon and xenon indicates that the neutral Kaons are scattered considerably less frequently in the nucleus. There are 3 figures, 5 formulas, and one table.

ASSOCIATION: Institute of theoretical and experimental physics (Institut teoreticheskoy i eksperimental'noy fiziki); Joint Institute of Nuclear Research (Ob'yedennyy institut yadernykh issledovaniy).

SUBMITTED: 17Nov62 DATE ACQ: 12Jun63

ENCL: 01

SUB CODE: PH

NR REF SOV: 007

OTHER: 007

Card 2/32



ACCESSION NR: AP4042562

S/0056/64/046/006/2023/2027

AUTHORS: Gramenitskiy, I. M.; Ivanovskaya, I. A.; Kanarek, T.;  
Okhrimenko, L. S.; Prokesh, A.; Tikhonova, L. A.

TITLE: Investigation of the reaction  $\pi^- + \text{Xe} \rightarrow \pi^- + \pi^0 + \text{Xe}$  for  
9 GeV/c primary negative pions

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2023-2027

TOPIC TAGS: pion, pion interaction, pi meson product, negative pi  
meson, neutral pi meson, xenon, Coulomb field

ABSTRACT: The production of negative and neutral pions in the inter-  
action between negative pions and nuclei, with small momentum trans-  
fer to the recoil nucleus, was investigated in a xenon bubble chamber.  
The greatest interest in these reactions lies in the process of pro-  
ducing a neutral pion in a Coulomb field, for this reaction can yield  
information on the interaction between pions and gamma rays. The se-

Card 1/2

ACCESSION NR: AP4042562

lection criteria and the measurement procedures and the data reduction procedure are described in detail. An upper limit of  $1.0 \pm 0.2$  mb is estimated for the cross section for production of neutral pions in the Coulomb field of the xenon nucleus. This estimate does not agree with results by others and possible reasons for the discrepancy are suggested. "The authors are grateful to Ye. V. Kuznetsov for calling their attention to the topic, to M. I. Podgoretskiy and A. S. Martyanov for helpful discussion, and to the staff of technicians that took part in the scanning and measurement." Orig. art. has: 3 figures and 4 formulas.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 19Jan64

DATE ACQ:

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 003

Card 2/2

IVANOVSKAYA, I.A.; KUZNETSOV, Ye.V.; PROKESH, A.; CHUVILO, I.V.

Angular distribution of the decay products of  $\Lambda$ -hyperons produced  
by 2.8 Bev./c  $\pi^+$ -mesons on xenon nuclei. Zhur. eksp. i teor. fiz.  
43 no.3:765-774 '62. (MIRA 15:10)

1. Institut teoreticheskoy i eksperimental'noy fiziki AN SSSR i Ob'-  
yedinennyy institut yadernykh issledovaniy.  
(Hyperons--Decay) (Mesons) (Xenon).

PROKESH, A.

GRAMENITSKIY, I. M., IVANOVSKAYA, I. A., KANAIEK, T., MARTINOV, A. S.,  
OKHIMENKO, L. S., PROKESH, A., STRUGALSKIY, S. S., TIKHONOVA, L. A. and CHUVILO, I. V.

"Neutral Strange Particles Production on Xenon Nuclei in the 9 GeV/c  $\pi^-$ -  
Meson Beam"

report presented at the Intl. Conference on High Energy Physics, Geneva,  
4-11 July 1962

Joint Institute for Nuclear Research  
Laboratory of High Energies

PROKESH, A.

GRAPENITSKIY, I. M., EVANOVSKAYA, I. A., KANAREK, T., MARTINOV, A. G., OKHIDENKO, L. G.,  
PROKESH, A., TIKHONOVA, L. A.

"Cross-Section of the Generation of  $\pi^+$ -Mesons in the Coulomb Field  
of the Xenon Nucleus at the Momentum of Primary  $\pi^+$ -Mesons 9 GeV/c"

report presented at the Intl. Conference on High Energy Physics, Geneva,  
4-11 July 1962

Joint Inst. for Nuclear Research  
Lab. of High Energies, Dubna, 1962

IVANOVSKAYA, I.A.; KUZNETSOV, Ye.V.; PROKESH, A.; CHUVILO, I.V.

Generation of strange particles by  $\pi^-$ -mesons with 2.8 Bev/c momentum on xenon nuclei. Zhur.eksp.i teor.fiz. 44 no.5:1456-1462 My '63. (MIRA 16:6)

1. Institut teoreticheskoy i eksperimental'noy fiziki i Ob'yedinennyy institut yadernykh issledovaniy.  
(Mesons) (Nuclear reactions)

S/056/62/043/003/005/063  
B125/B102

AUTHORS: Ivanovskaya, I. A., Kuznetsov, Ye. V., Prokesh, A.,  
Chuvilo, I. V.

TITLE: Angular distribution of decay products from  $\Lambda$ -hyperons  
produced by 2.8 BeV/c  $\pi^-$ -mesons acting on xenon nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,  
no. 3 (9), 1962, 765-774

TEXT: The asymmetry coefficients for the angular distribution of the  
decay products of  $\Lambda$ -hyperons were determined from 360 reliably  
identified  $\Lambda$ -particles and from 70 cases ( $\Lambda$  or  $K^0$ ) imperfectly deter-  
mined. These particles were produced by negative 2.8 BeV/c pions on  
xenon nuclei according to  $\pi^- + p \rightarrow K^0 + \Lambda$ . The relation  $\alpha P_1 = 0.27 \pm 0.12$   
holds for the up - down asymmetry with respect to the plane of production  
of the  $\Lambda$ -particles at momenta from 400 to 900 Mev/c in the coordinate  
system of Fig. 2.  $\alpha$  characterizes the degree of parity non-conservation  
in the  $\Lambda$ -particle decay. With

Card 1/1

Angular distribution of decay ...

S/056/62/043/003/005/663  
B125/B102

$\alpha = -0.75^{+0.15}_{-0.50}$  the value  $\bar{P} = 0.36^{+0.18}_{-0.22}$  is deduced for the polarization

$\bar{P}$  averaged over the production angle. The transverse polarization depends on the momentum of the  $\Lambda$ -hyperon in the laboratory system and perhaps changes its sign at the momenta  $> 900$  Mev/c. Owing to this low polarizability, heavy nuclei cannot be used as targets for the production of polarized particles. Systematic errors, difficult to control (being perhaps of the same order as the effect itself), make it more difficult to draw exact conclusions as to the amount of  $\alpha\bar{P}_2$ . This amount characterizes the forward-backward asymmetry. For all  $\Lambda$ -particles produced according to  $\pi^- + \text{Xe} \rightarrow \Lambda + K + \text{Xe}' + n\pi$ , perhaps  $\alpha\bar{P}_3 = 0$ . The quantity  $\alpha\bar{P}_3$  characterizes the right - left asymmetry.  $\text{Xe}'$  denotes the secondary nucleus and  $n\pi$  are the accompanying pions. With  $\psi_{\Lambda} < 26^\circ$  the asymmetry  $\alpha\bar{P}_3$  is non-zero for all  $\Lambda$  with any momentum. There are 3 figures and 1 table.

Card 2/4 3



Angular distribution of decay ...

S/056/62/043/003/005/063  
B125/B102

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki  
Akademii nauk SSSR (Institute of Theoretical and  
Experimental Physics of the Academy of Sciences USSR).  
Ob'yedinennyy institut yadernykh issledovaniy (Joint  
Institute of Nuclear Research)

SUBMITTED: March 27, 1962

Table: dependence of the asymmetry coefficients on momentum (in Mev/c)  
and the emission angle of the  $\Lambda$ -particle in the laboratory system.

Card 3/4 3

IVANOVSKAYA, I.A.; KUZNETSOV, Ye.V.; MAL'TSEV, E.I.; PROKESH, A.;  
STASHKOV, G.M.; CHUVILO, I.V.

Possible case of the decay of a neutral cascade meson. Zhur.  
eksp. i teor. fiz. 39 no. 1:44-46 J1 '60. (MIRA 13:12)

1. Ob'yedinennyi institut yadernykh issledovaniy.  
(Mesons--Decay)

L 41017-65 EWT(m) Feb DIAAP

ACCESSION NR: AP5007712

S/0367/65/001/001/0113/0121

AUTHOR: Gramenitskiy, I. M.; Kinarek, T.; Mal'tsev, V. M.; Prokesh, A.; Tikhonova, L. A.

TITLE: Quasi-elastic  $\pi$  (sup -)-n interactions <sup>19</sup> at 9 GeV

SOURCE: Yadernaya fizika, v. 1, no. 1, 1965, 113-121

TOPIC TAGS: quasielastic scattering, differential pion nucleon scattering, optical neutron coefficient, pion neutron background scattering,  $\pi$  meson nucleon interaction, backward scattering

ABSTRACT: Quasi-elastic  $\pi^-$ -n scattering at the  $\pi^-$ -meson momentum of 9 GeV/c was studied in a 24-liter xenon bubble chamber (where "quasi-elastic" means elastic scattering angles larger than

Card 1/2

L 41017-65

ACCESSION NR: AP5007712

1963). The optical characteristics of the neutron were determined as follows:  
the radius  $R = 1.08 \cdot 10^{-13}$  cm, the absorption coefficient  $K = 0.58 \cdot 10^{-13}$  cm<sup>-1</sup>.  
On the basis of one case of  $\pi^+n$  scattering into the backward half-sphere of the  
laboratory system, the  $\pi^+n$  cross section for backward scattering was estimated

and 1 table.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute for Nuclear Research)

SUBMITTED: 25Jul64

ENCL: 00

SUB CODE: NP

NO REF SOV: 003

OTHER: 007

CC  
Card 2/2

PROKESH, A.

82597

S/056/60/039/01/05/029  
B006/B070

24.6900

AUTHORS: Ivanovskaya, I. A., Kuznetsov, Ye. V., Mal'tsev, E. I.  
Prokesh, A., Stashkov, G. M., Chuvilo, I. V.

TITLE: A Possible Case of the Disintegration of a Neutral Cascade  
Meson

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,  
Vol. 39, No. 1 (7), pp. 44-46

TEXT: During the irradiation of a two liter Xenon bubble chamber with negative pions (momentum 3 BeV/c) in the ITEF AN SSSR (Institute of Theoretical and Experimental Physics of the AS USSR) 20000 photographs were taken. In their evaluation one was found, represented in Fig. 1, which is assumed to disintegrate according to the scheme  $D^0 \rightarrow K^+ + \pi^-$ . Fig. 2 shows the geometrical scheme of this decay event. The chamber worked without a magnetic field. Identification of the particles was made only according to ionization and multiple scattering. The results of measurement are compiled in a table. In the diagram the path ends are denoted by letters, so that the particles (i.e. the tracks) are described in each case by two letters. Point b lies in the primary pion beam. The

Card 1/3

82597

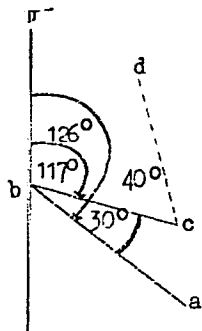
A Possible Case of the Disintegration of a  
Neutral Cascade Meson

S/056/60/039/01/05/029  
B006/B070

directions of motion of the particles are denoted by arrows. The mass of particle "bc", which is stopped in the chamber volume, was determined to be  $(490 \pm 190)$  Mev, which agrees with the mass of the K meson within the statistical error limits. The momentum determination for the "cd" particles gave the value  $(180 \pm 54)$  Mev/c, which corresponds to a  $K_{\pi 2}$  or  $K_{\mu 2}$

decay. Further considerations showed that the track sequence "bc" - "cd" represents a  $K^+$  meson decay (and not  $\pi - \mu - e$ ).

The "ba" particle of momentum  $(113 \pm 22)$  Mev/c and mass  $(195 \pm 55)$  Mev corresponds to a pion or a muon. Since the track ends with a nuclear disintegration, "ba" is considered to be a pion. Some other possibilities of decay modes are discussed, as for example,  $K^0 + n \rightarrow n + K^+ + \pi^-$ . But, on grounds explained here they have very small probabilities. The only probable interpretation of the observed decay remains the mode  $D^0 \rightarrow K^+ + \pi^- + Q$  with  $Q = 10 \div 50$  Mev. The mass of  $D^0$  is taken to be  $(660 \pm 50)$  Mev and the mode of production is assumed to be  $\pi^- + p \rightarrow n + D^0$ .



Carl 2/3

82597

A Possible Case of the Disintegration of a  
Neutral Cascade Meson

S/056/60/039/01/05/029  
B006/B070

Since a  $D^+$  meson is already known, it may be assumed that,  $D^{+-}$ ,  $D^0$ ,  
and  $D^-$  mesons exist, which all decay according to the scheme  $D \rightarrow K + \pi$ .  
There are 2 figures, 1 table, and 7 references: 5 Soviet, 1 Chinese,  
and 1 Italian. ✓

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint  
Institute of Nuclear Research)

SUBMITTED: February 15, 1960

Card 3/3



CELEDOVA, V.; PROKESOVA, N.; HAVLIK, B.; MULLER, O.

Demonstration of migration of *Musca domestica* from pig sheds  
into human dwellings. J.hyg.epidem. 7 no.3:360-370 '63.

1. Institute of Hygiene, Prague.

X

LAJKA, J;PROKESOVA, S;BREZA, J;JABLONICKY, S.

Secondary effects of antibiotics in otology. Bratisl. lek. listy  
31 no.9-10:921-949 1951, (GLML 22:2)

1. Of the Otolaryngological Clinic of Slovak University, Bratislava.

PROKESOVA, S.; GREGOR, J.

Our results following attice-antretomies. Cesk. otolar. 8 no.4:  
211-212 Aug 59.

1. Otolaryngologicka katedra lek. fak. UK v Bratislave, veduci doc.  
MUDr. J. Iajka.  
(EAR, MIDDLE, surg.)

PROKESOVA, V.

Contribution to bacteriological methods of determining the degree of water pollution. Cesk. hyg. 8 no.9:534-539 0. '63.

1. Hydrobiologicka laborator CSAV, Praha.

CZECHOSLOVAKIA

PROKESOVA, V.

Hydrobiological Laboratory CSAV (Hydrobiologicka  
laborator CSAV), Prague

Prague, Ceskoslovenska hygiena, No 9, 1963, pp 534-539

"Contribution to Bacteriological Methods of Determining  
the Degree of Water Pollution."

PROKESOVA, Vera, C.Sc.

Oxidation of organic substances in the Slapy Reservoir  
water. Vodni hosp 13 no.2:57-58 '63.

1. Hydrobiologická laborator Československé akademie věd,  
Praha.

LAJDA, Jan, Doc. Dr.; PROKESOVA-MANICOVA, Sl. Dr.

Therapy of pain after tonsillectomy. Cesk. otolar. 3 no.4:158-164  
Nov 54.

1. Z Otolaryngologicke kliniky SU v Bratislave  
(TONSILS, surgery  
tonsillectomy, postop. pain, ther., comparative  
evaluation)

PROKH, I., Cand Agric Sci (diss) -- "The composition and properties of water-soluble humus substances". Leningrad-Pushkin, 1960. 21 pp (Min Agric RSFSR, Leningrad Agric Inst), 250 copies (KL, No 14, 1960, 135)



PROKH, I.

Using ion exchange resins for investigating humus substances.  
Rykhovedenie no.1:95-98 Ja '61. (MIRA 14:1)

1. Leningradskiy sel'skokhozyaystvennyy institut.  
(Humus) (Resins, Synthetic) (Ion exchange)

L 30057-65 EWT(1)/EWT(m)/ENG(v)/EAP(j)  
ACCESSION NR: AF5002218

Pc-4/Pe-5/Pae-2 RM/GW  
S/2599/64/000/042/0022/0025

AUTHOR: Prokh, L. A.

TITLE: Sounding the surface layer of the atmosphere with paired balance-meters

SOURCE: Kiev. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut. Trudy, no. 42, 1964. Voprosy fiziki oblakov i tumanov (Problems in the physics of clouds and fogs), 22-25

TOPIC TAGS: mist formation, atmospheric surface layer, atmospheric sounding, lower atmosphere, balance meter, radiation comparator, radiation balance, atmospheric temperature

ABSTRACT: Yanishevskiy paired balance meters (radiation comparators) were raised by a string of tethered hydrogen balloons in order to determine changes in the

Card 1/2

L 30057-65

ACCESSION NR: AT5002218

152  
improve reliability, the sensors had to be covered by streamlined polyethylene shields to cut the effect of wind and droplets of mist settling on the outer surface. A light-weight black shield with temperature control had to be introduced between the sensors. The results obtained are illustrated. Orig. art.  
L-30057-65 and 4 formulas.

PROKH, L.Z. (Kiyev)

Dew under the microscope. Priroda 53 no.9:99-101 '64.  
(MIRA 17:10)

*PROKH L. E.*  
PRIKOT'KO, G.F.; PROKH, L.Z.

Fumuli over Kiev on August 17, 1955. Trudy Ukr. HIGMI no. 7:81-99  
'57. (MIRA 11:4)  
(Kiev--Clouds)

PROKH, L.Z.

Attenuation of total radiation by clouds. Trudy Ukr NIGMI  
no.10:15-24 '59. (MIRA 13:5)

1. Eksperimental'naya baza Ukrainskogo nauchno-issledovatel'skogo  
gidrometeorologicheskogo instituta.  
(Kiev region--Solar radiation)  
(Clouds)

1(7)

SOV/50-59-10-10/25

AUTHORS: Prokh, L. Z.; Yaremenko, L. N.

TITLE: Observations of Aurorae Boreales in the Ukraine

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 10, p 31 (USSR)

ABSTRACT: Visual observations of aurorae boreales by the Network of Hydrometeorological Stations in the Ukraine under the MGG-Program were made at 16 stations. In 1957 nine aurorae boreales were observed: from January 21 to 22, on July 1, from September 3 to 5, on September 22, from September 29 to 30, from October 19 to 21, and on October 31. In 1958: on February 11, May 14, from July 8 to 9, and from September 4 to 5. The three last mentioned observations are mentioned in the records of the magnetic Station of the Akademiya nauk USSR (Academy of Sciences of the UkrSSR) at Demidovo, near Kiyev. This station was established in the spring of 1958. Aurorae boreales were further observed on the Crimea, in Odessa, and other Southern regions. They coincided with the most active magnetic storms. In many cases, however, magnetic storms were not accompanied by any polar lights.

Card 1/1

FROKH, L.Z.

Atmospheric transparency in Kiev. Meteor. i gidrol. no.12:22-23  
D '60. (MIRA 13:11)  
(Kiev--Atmospheric transparency)



PROKH, L.Z.; VASIL'YEV, V.M.

Visual observations of auroras at the hydrometeorological stations  
of the Ukraine in 1957-1958. Mezhdunar.geofiz.god [Kiev] no.2:62-65 '60.  
(MIRA 14:1)

1. Ukrainian Hydrometeorological Research Institute of the Hydro-  
meteorological Service Administration of the Ukrainian S.S.R.  
(Auroras)

BABICHENKO, V.N.; GUK, N.I.; GOYSA, N.I.; PRIKHOT'KO, G.F.; PROKH, L.Z.;  
ROZOVA, Ye.S.

Meteorological observations in the Ukraine during the period July  
1957-June 1958. *Mazhdunar. geofiz. god* [Kiev] no.2:130-140 '60.  
(MIRA 14:1)

1. Ukrainian Research Institute for Hydrometeorology.  
(Ukraine--Meteorology--Observations)

PROKH, L., nauchnyy sotrudnik

Voice of heaven. Znan. ta pratsia no. 10:13 0 '60. (MIRA 14:4)

1. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii  
institut.

(Natural history)

PROKH, L., nauchnyy sotrudnik

Breath of the Kamchatka volcanoes. Znan. ta pratsia no. 11:29 N '60.  
(MIR: 14:4)

1. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy  
institut.

(Kamchatka--Volcanoes)

PROKH, L.Z.

Characteristics of yearly variation of the radiation balance and  
soil temperature in Kiev. Trudy UchNIGMI no.20:36-42 '60.

(MIRA 14:2)

(Kiev--Soil temperature)

(Kiev--Solar temperature)

PERKH, L.Z.; BELOUSOV, V.V.

Photo measurement of atmospheric humidity. Meteor. i gidrol. no.3:  
51-52 for '61. (MIRA 14:2)  
(Hygrometry)

PROKH, L.Z.

Sounding the lower atmosphere during fogs. Trudy UkrNIGMI  
no.26:137-144 '61. (MIRA 15:2)  
(Meteorological instruments)

PROKH, L.Z. (Kiyev)

Melting of the clouds. Priroda 50 no. 3:56 Mr '61.

(MIRA 14:2)

(Clouds)



PROKH, Leonid Zus'yevich; FREYDZON, A.I., otv. red.; LIVSHITS, B.Kh.,  
red.; FLAUM, M.Ya., tekhn. red.

[The angry and the kind winds] Serditye i dobrye vetry. Lenin-  
grad, Gidrometeor. izd-vo, 1961. 150 p. (MIRA 15:3)  
(Winds)

PROKH, L.Z. (Kiyev)

"Glazed frost and its control" by V.E.Buchinskii. Reviewed by  
L.Z.Prokh. Priroda 50 no.11:111 N '61. (MIRA 14:10)  
(Ice) (Buchinskii, V.E.)

PROKH, L., inzh.

Satellites and weather. Nauka i zhyttia 12 no.6:30-31 Je '62.

(MIRA 15:7)

(Astronautics in meteorology)

AUTHOR: Prokh, L. Z.

TITLE: Some results of measurements of drop dimensions in clouds of the steppe zone of the Ukraine

SOURCE: Kiev. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut. Trudy, no. 42, 1964. Voprosy fiziki oblakov i tumanov (Problems in the physics of clouds and fogs), 26-35

TOPIC TAGS: cloud physics, droplet size, atmospheric turbulence, wind velocity, mist formation

ABSTRACT: In measuring the size of droplets, the author used the simplest type of trap with a circular opening, as in the technique of Akimov and Zaytsev. The author discusses corrections for the effect of wind velocity on drop collection, the effect of turbulence on drop-size spectrum, etc. and analyzes 317 microphotographs made from 317 samples in the Zhovtnev-Dnepropetrovsk region in the period 1952-1962, always with a 15-sec. exposure. The slides used for drop collection

were coated with a mixture of translucent oil and

Card 1/2

L 30058-65

ACCESSION NR: AT5002219

one-half of all drops had diameters of 6-14 microns. The relationship between drop parameters and time of day, meteorological conditions, etc, is discussed and illustrated with tables and graphs. Drop size and number during mist for-

PORE, L.L. (Kiyev)

... for determin... .. of ... .. (as  
200 h.). Vap. kur., ... .. 29 no.ks  
170-171. Nr-Ap 164 (MIRA 18:2)

PROKH, L.Z.

Sounding the surface layer of the atmosphere by means of  
coupled balance meters. Trudy Ukr. NIIMI no. 42:22-25 '64  
(MIRA 18:1)

Some results of measurements of droplet sizes in fogs of the  
steppe zone of the Ukraine. Ibid.:26-35

Microstructure of precipitation forming on horizontal sur-  
faces in fog. Ibid.:36-41

PROKH, L.Z.; ROYEV, L.M.

Radiation cooling of a turbid air layer. Geofiz. i astron.  
no.8:106-108 '65.

(MIRA 1961)

1. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy  
institut.



MOZZHUKHIN, O.A.; PROKH, L.Z.

Allowing for temperature stratification, air humidity, and the accuracy of their measurement in selecting the time for radio-geodesic measurements. Geofiz. i astron. no.8:109-113 '65.

(MIRA 19:1)

1. Kiyevskiy inzhenerno-stroitel'nyy institut i Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut.

ACC NR: AT6031972 (A) SOURCE CODE: UR/3199/66/000/015/0050/0057

AUTHOR: Prokh, L. Z.

ORG: none

TITLE: Operation of coupled Yanishevskiy balancemeters with forced ventilation

SOURCE: AN SSSR. Mezhdovedomstvennyy geofizicheskiy komitet.  
Meteorologicheskiye issledovaniya, no. 15, 1966, 50-57

TOPIC TAGS: balancemeter, radiation flux, black body, thermoresistance, ventilating airflow, temperature gradient, meteorologic instrument, fog, wind, atmospheric temperature / Yanishevskiy balancemeter

ABSTRACT: For certain investigations such as the study of the structure of fogs, frosts, dry winds, etc., separate measurements of ascending and descending radiation fluxes is of great importance. This paper describes a two-sided pyrgeometer used for separate flux measurements. This pyrgeometer consists of two standard balancemeters, one placed above the other with a black body between them. The black body consists of two plates made of thin copper foil with a thermoresistant, flat, bifilar spiral between them. Both sides of the black body are blackened with Dutch niello. The temperature of the body is controlled. All sensitive surfaces are subjected to constant forced ventilation. Unlike the

Card 1/3

ACC NR: AT6031972

Courvoisier instrument, temperature differences outside and inside the balancemeters are measured in this pyrgeometer. The balancemeter interior receives radiation from the black body which has the temperature of the surrounding air because of the intensive, constant, forced ventilation. The length of the ventilation shaft is many times larger than the thickness of the airflow ventilating the black body and balancemeters, which provides thermal stability to the flow and eliminates the high temperature gradient inside the instrument. An advantage of this instrument is in the separate measurement of radiation fluxes relative to the radiation of the same black plate of a certain temperature with constant ventilation of all sensitive surfaces. The two-sided pyrgeometer was presented at Tashkent in September 1963 where it was tested under conditions of high temperatures, clear air, and weak wind during the day and at night. The values of soil radiation, measured with the pyrgeometer, changed slowly with the change of soil temperature under the instrument, while the atmosphere radiation changed steadily with the sun's elevation. The pyrgeometer conversion factor has been derived on the basis of graduations of the black body. It is established that the mean square deviation of the balancemeter conversion factor depends on the value of the given balance; the error decreases if the balance values are in the range of 0.2—0.5 cal/cm<sup>2</sup>.min. Ventilation instability of the sensitive surfaces of the pyrgeometer under natural conditions affects the operation of the instrument. Photographs are given

Card 2/3

ACC NR: AT6031972

of the convective jets near the sensitive surfaces of double balance-meters. It is concluded that the instrument promises to be very useful. Orig. art. has: 3 tables, 4 figures, and 2 formulas.

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 013/ OTH REF: 001

Card 3/3

PROKH, I.Z.; ROYEV, I.M.

Origin of a thin layer of lifted night fog. Trudy UkrNIIM no.42:96-  
100 '65. (MIRA 18:8)

PROKH, L.Z.

Study of the stratification of radiation balance in the boundary layer of the atmosphere. Trudy UkrNIGMI no.48:101-106 '65.

Separate measurement of ascending and descending streams of radiation. Ibid.:107-112

Automation of the sampling of the water content of fog by the V.A. Zaitsev method. Ibid.:121-125 (MIRA 18:8)

L 56574-65 ENT(1)/ECC RB/GN/WS-4  
ACCESSION NR: AR5013956

UR/0169/65/000/004/B015/B015  
551.501.8

AUTHOR: Mozzhukhin, O.A.; Prokh, L.Z.

TITLE: Effect of temperature and humidity stratification in the lowest atmospheric layer on the refractive index of radiowaves

SOURCE: Ref. zh. Geofizika, Abs. 4B103

CITED SOURCE: Materialy Mezhdunar. geofiz. goda. Inform. byul., no. 6, 1964, 95-102

TOPIC TAGS: temperature stratification, humidity stratification, atmospheric temperature, humidity, refractive index, radiowave refractive index

ABSTRACT: On the basis of several series of repeated soundings of the lowest atmospheric layer, made by means of a remotely controlled thermoelectric psychrometer designed by one of the authors, the refractive index as dependent on altitude and time is given.

SUB CODE: ES

ENCL: 00

*Card 1/1*

I 35590-65 RB/GW/WE-L

ACCESSION NR: AT5005140

S/3133/64/000/006/0095/0102

AUTHOR: Mozzhukhin, O. A.; Prokh, L. Z.

18  
16  
B+1

TITLE: Effect of air temperature and humidity stratification in the surface layer of the atmosphere on the index of radio wave refraction

SOURCE: An UkrSSR. Mezhdovedomstvennyy geofizicheskiy komitet. Informatsionnyy byulleten', no. 6, 1964. Materialy Mezhdunarodnogo Geofizicheskogo Goda (Materials of the International Geophysical Year), 95-102

TOPIC TAGS: atmospheric stratification, atmospheric temperature, humidity, radio wave, refractive index

ABSTRACT: The effect of temperature and humidity on the index of radio wave refraction was studied using a new remote-controlled thermoelectric psychrometer developed at the Ukrainskiy nauchnoissledovatel'skiy gidrometeorologicheskiv institut



tive index were computed using the formula:

Card 1/5

L 35590-65

ACCESSION NR: AT5005140

$$N = (n - 1) \cdot 10^8 = \frac{77.6}{T} \left( p + \frac{4744}{T} e \right).$$

0

where T is air temperature in degrees absolute, e is absolute air humidity in mb, p is atmospheric pressure in mb, and N is the refractive index, expressed in N-units. N-profiles were drawn to give a graphic representation of the distribution of the refractive index with height. Fig. 1 of the Enclosure is such a profile; the refractive index in N-units is plotted along the x-axis and altitude in meters along the y-axis. Comparison of such profiles reveals that the refractive index changes appreciably both with time and altitude. It is shown that periodically there are layers of anomalous distribution of the refractive index at different altitudes and that these layers change in thickness and altitude. This is illus-

Card 2/5

L 35590-65

ACCESSION NR: AT5005140

2

exchange and eliminate microinversions. Further study is necessary to verify this.  
Orig. art. has: 6 formulas and 8 figures.

ASSOCIATION: Kiyevskiy inzhenermostroitel'nyy institut (Kiev Civil Engineering  
Institute); Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut  
(Ukrainian Hydrometeorological Scientific Research Institute)

L 35590-65

ACCESSION NR: AT5005140

ENCLOSURE: 01



Fig. 1. N-profiles for daytime on 30 October 1961: 1) fog at 1150 hours; 2) haze, overcast, 1230 hours; 3) overcast, 1350 hours; 4) calm, overcast, 1630 hours; 5) 1744 hours; 6) 1840 hours; 7) 1025 hours.

Card 4/5

L 35590-65

ACCESSION NR: AT5005140

ENCLOSURE: 02

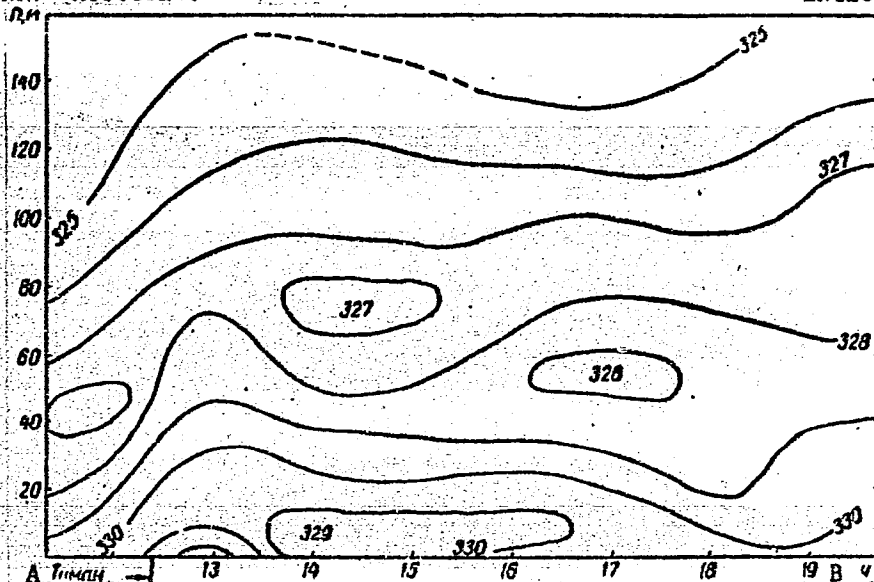


Fig. 2. Isolines of equal values of refractive index during second half of  
 ... .. height is plotted along the y-axis and time along the x-axis

Card 5/5

(fog followed by overcast). A) fog, B) clouds

ACCESSION NR: AT4018988

S/2599/63/000/036/0063/0073

AUTHOR: Prokh, L. Z.

TITLE: Certain results of frequent sounding of fog.

SOURCE: Kiev. Ukr. n.-i. gidrometeor. institut. Trudy\*, no. 36, 1963. Voprosy\* fiziki atmosfery\* (Problems in atmospheric physics), 63-73.

TOPIC TAGS: meteorology, fog, atmospheric boundary layer, temperature inversion, atmospheric blocking layer, balloon sounding, weather forecasting, temperature microinversion, atmospheric stratification

ABSTRACT: In October-November of 1961, the Ukrainskiy n.-i. gidrometeorologicheskii institut (Ukrainian Hydrometeorological Scientific Research Institute) made a series of frequent soundings of the lower part of the boundary layer of the atmosphere with strings of captive balloons and a sensor developed by the author. The investigation was to clarify the characteristics of blocking and inversion layers of small vertical extent and determine the stage of the process corresponding to the development and disappearance of such layers. Such data are needed for developing methods of artificial fog modification. The literature contains little information on changes of the vertical temperature gradient in

Card 1/5

ACCESSION NR: AT4018988

individual relatively thin layers at a rate different from the mean change for the entire boundary layer gradient, although the investigated phenomenon is responsible for disruption of the monotonic change of meteorological elements with height, often occurring in fogs. The nonhomogeneous structure of the lower layers can affect greatly the conditions for development and disappearance of fogs. An effort was made to detect deviations exceeding  $0.2^{\circ}$  from the smooth vertical distribution of temperature. The method used has been described earlier; semiconductor thermistors were used as sensing elements. The instrument was carried aloft by balloons (radiosonde envelopes Nos. 100 and 150); the captive balloons were spaced at 10 or 15 m intervals; sounding series lasted 8-10 hours; height of sounding ranged from 100 to 240 m. These data were supplemented by radiosonde and aircraft sounding data. Synoptic conditions during the investigations are described. Significant results are shown in Fig. 1 of Enclosure. Inversions and blocking layers with small vertical extent were observed during change of temperature and humidity profiles from unstable to inversion and vice versa. Change of profiles did not occur gradually from bottom to top or top to bottom but by change of stratification in individual relatively thin layers. The vertical thickness of detected microinversions was sometimes 10-20 m. The smaller the vertical thickness of the microinversion, the less was its stability in time. Air temperature in microinversions is  $0.1$  to  $0.7^{\circ}$  higher than in

Card 2/53

ACCESSION NR: AT4018988

adjacent layers. With the development of advection, turbulence or other processes causing change of vertical profiles the microinversions joined into thicker inversion or isothermal layers, extending from the surface to heights of tens or hundreds of meters; during such a change of particular sign the microinversions or blocking layers gradually disappeared. They also disappeared when precipitation fell, turbulent exchange intensified or appreciable instability appeared in thick layers. The determined characteristics suggest the possibility of artificial fog modification by inducing changes in individual relatively thin layers. Orig. art. has: 3 figures.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut, Kiev (Ukrainian Hydrometeorological Scientific Research Institute)

SUBMITTED: 00

DATE ACQ: 27Mar64

ENCL: 01

SUB CODE: AS

NO REF SOV: 021

OTHER: 005

Card 3/3

PROKH, L.Z.

Measurement methods of the temperature and air moisture  
of fog. Trudy UkrNIGMI no.31:165-172 '62. (MIRA 16:11)



PROKHA, Fedor Moiseyevich; MISHCHENKO, Ivan Stepanovich; TIMOFEYEV,  
V.A., red.; AZAROVA, V.G., red.izd-vs; KORNUSHINA, A.S.,  
tekhn.red.

[Manufacture of baguette] Proizvodstvo bageta. Moskva, Gos-  
lesbumizdat, 1960. 41 p. (MIRA 14:4)  
(Woodworking industries)

PROKHANOV, Ya. I.

"The Cotton Plant and Its Wild Varieties," 1948

PROKHANOV, Ya. I. Dr. Biol. Sci.

"The Publication of a Russian Translation of the Most Recent Regulations in Botanical Nomenclature," Botan. zhur., 34, No.4, 1949

Compilers: PROKHANOV, Ya. I.; SHISHKIN, B. K.; SHTEYNBERG, Ye. I.; YUZEPCHEK, S. V.;  
AFANAS'YEV, K. S.; BORISOVA, A. G.; VASIL'YEV, V. N.; GORSHKOVA, S. G.; ILIN, M. M.;  
KLOKOV, M. V.; MALEYEV, V. P.; MURAV'YEV, O. A.; POBEDIMOVA, Ye. G.; POYARKOVA, A. I.;  
KOMAROV, V. L. (Acad.); Editors: SHISHKIN, B. K.; BOBROV, Ye. G.

Flora of the USSR, Vol 15, Moscow-Leningrad, 743 pp., 1950

Book W-22202, 7 Apr 52

PROKHANOV, Ya. I.

Spindle Tree - China

New species of the genus *Euonymus* - spindle tree, from the parentage of the warty spindle tree, in the northwest mountains of China. Bot. mat. Gerb. 14, 1951.

9. Monthly List of Russian Accessions, Library of Congress, November 1952, Uncl.  
2

PRCKHANCY, YA. I.

Botany - Societies; Botany - Nomenclature

Amendments and additions to the international rules on botanical nomenclature enacted by the seventh international botanical congress in Stockholm in 1950. Bot. zhur. 37, no. 2, March-April 1952

SO: Monthly List of Russian Accessions, Library of Congress, August 1952 ~~1952~~, Uncl.

PROKHANOV, Ya.I.

Genus Senra Cavanilles and how it differs from the cotton plant.  
Bot.mat.Gerb. 15:159-176 '53. (MLRA 7:2)  
(Botany--Classification) (Malvales)

LAN'YAU, I. [Lanjouw, J.]; PROKHANOV, Ya.I. [translator]; SHISHKIN, B.K., obshchiy red.; LINCHEVSKIY, I.A., otv.red.; YAKOVLEVA, V.M., red.izd-va; SMIRNOVA, A.V., tekhn.red.

[International code of botanical nomenclature adopted by the Eighth International Botanical Congress, Paris, July 1954]  
Mezhdunarodnyi kodeks botanicheskoi nomenklatury, prinyati vos'mym Mezhdunarodnym botanicheskim kongressom, Parizh, iul' 1954 g. Pdogotovlen i izdan: I.Lan'iau, i dr. Pod red. B.K. Shishkina i I.A.Linchevskogo. Moskva, 1959. 90 p.

(MIRA 12:10)

1. Akademiya nauk SSSR. Botanicheskiy institut.  
(Botany--Nomenclature)



PROKHANOV, Ya.I.

A brief survey of the spindle tree system in the U.S.S.R.;  
additions and corrections. Bot.mat.Gerb. 20:409-412  
'60. (MIRA 13:7)

(Spindle tree)

PROKHANOV, Ya.I.; TANFIL'YEV, V.G.

A new weed in the fields of the Northern Caucasus. Bot. mat.  
Gerb. 21:133-135 '61. (MIRA 14:10)  
(Caucasus, Northern--Silene)

PROKHANOV, Ya.I.

← New species from northeastern Dagestan. Bot. mat. Gerb. 21:  
417-437 '61. (MIRA 14:10)  
(Dagestan--Botany)

PROKHANOV, Ya.I.

Corrections to the article "New species from northeastern Dagestan".  
Bot.mat.Cerb. 22:327 '63. (MIRA 17:2)

PROKHANOV, Ya. I.

"The delimitation of the New World cotton species in connection with their origin."

report submitted for 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

Pedagogical Inst, Makhach-Kala.

PROKHANOV, Ya.I. [deceased]

Evolution of the leaf of woody dicotyledons. Trudy MOIP  
Otd. biol. 13:71-110 '65 (MIRA 19:1)

Origin of divotyledonous perennial grasses; facts and  
hypotheses. Ibid.:111-123

Grasslands and recent deserts, their nature and origin.  
Ibid.:124-154

PROKHOROV, A.M.; FETTEROV, V.B.

Paramagnetic relaxation in  $K_2(Fe,Co)(OH)_2$  at temperatures  
from 0.1° to 4.2°K. Zhuravskii tekh.fiz. 46 no.6:1937-1952  
Fe '64.

1. Fizicheskii institut imeni P.N. Lebedeva (N.A.S.S.S.R.).  
(Moscow, U.S.S.R.)

PROKHANOV V.F.

AUTHOR

Prokhanov.V.F.

32-8-42/61

TITLE

New Model of a Machine Using the Centrifugal Method in Testing for Refractoriness.

(Novaya model' mashiny dlya ispytaniya na zharoprochnost' tsentrobeznyy metodom - Russian)

PERIODICAL

Zavodskaya Laboratoriya, 1957, Vol 23, Nr 8, pp 983-984 (U.S.S.R.)

ABSTRACT

The new machine permits a simultaneous examination of 24 samples: as to small degrees of deformation and as to strength up to destruction. The machine consists of two columns which are firmly mounted on a cast plate. A silumin plate with draw bolts is fixed above them. This forms as a whole a closed system which serves for the neutralization of the vibration phenomena occurring during the operation of the machine. Between the columns there is a furnace for the warming up of the samples (up to 1100°). If it is necessary to raise this temperature up to 1200° a furnace with silican carbide inset is used. The operating space of the furnace permits the bending of the samples up to an angle of 90°. The temperature is controlled here by a thermo couple and the contact galvanometer. Current is supplied by two voltage regulators PHO-250-50. A shaft of refractory metal is mounted vertically in the center of the furnace on which there is a disk with a clamping device for fixing the samples. This shaft is driven by an elastic transmission of an asynchronous motor up to a frequency of 4000/min. The shaft has a fly wheel outside the furnace. In one of the ground

Card 1/2



New Model of a Machine Using the Centrifugal Method in Testing  
for Refractoriness.

32-8-42/61

columns of the machine there is a lifting device with a brake for the lifting of the shaft from the stove as well as a lateral displacement. In the upper part of the shaft there is a speedometer for the control of the frequency of the shaft and of the disk with the sample. The samples (rods) fixed to the middle of the disk have weights on their ends which can cause at given frequency a centrifugal load up to about 70 kg/mm<sup>2</sup>. The bearings of the shaft have a cooling device. This machine can be used for short as well as for longer examinations of refractoriness and admissible degree of heat of the samples. There is drawing in the text.

ASSOCIATION Institute of Metallurgy im. A.A. Baykov of the Academy of Sciences of the USSR  
(Institut metallurgii im. A.A. Baykova Akademii nauk SSSR.)

AVAILABLE Library of Congress.  
Card 2/2

KORNILOV, I.I.; BUDBERG, P.B.; VOLKOVA, M.A.; PROKHANOV, V.F.;  
PYLAYEVA, Ye.N.

Developing a method of hot pressing of titanium and titanium alloy  
powders. Titan i ege splavy no. 1:25-32 '58. (MIRA 14:5)

1. Institut metallurgii AN SSSR.

(Titanium—Metallurgy) (Powder metallurgy)

0

PROKHANOV, V. F.

18(2)

PHASE II - ABSTRACTS

AB-1

Akademiya nauk SSSR. Institut metallurgii

Titan i yego splavy; metallurgiya i metallovedeniye (Titanium and Its Alloys; Metallurgy and Physical Metallurgy) Moscow, Izd-vo AN SSSR, 1958. 209 p. 4,000 copies printed.

Resp. Ed.: N.V. Ageyev, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: V.S. Rzheznikov; Tech. Ed.: A.A. Kiseleva.

INTRODUCTION: This book, of which a Phase I Exploitation (SOV/1200) has been prepared, is a collection of scientific papers devoted to the study of titanium and its alloys from three main points of view: physical metallurgy, forming, and welding. Special problems investigated include structural changes occurring during welding, determination of the content of harmful gases, development of industrial methods of rolling, and oxidation at various temperatures.

PART I. PHYSICAL METALLURGY

Ageyev, N.V., and L.A. Petrova (Institute of Metallurgy, USSR Academy of Sciences). Stability of the Beta Phase in Titanium-Molybdenum Alloys  
Card 1/43

3

Titanium and Its Alloys (Cont.)

AB-1

decrease in lattice parameter. 4) Formation of the omega phase during the decomposition of the beta phase causes an increase in hardness in the investigated alloys, and is also the cause of brittleness observed in alloys containing 5.42-6.93 percent of Mn after heating in the 500-200° range, with holding times of 6-16 hours. Precipitation of the alpha phase is accompanied by a drop in hardness. There are 8 figures, 2 tables, and 5 references (1 Soviet and 4 English).

Kornilov, I.I., P.B. Budberg, M.A. Volkova, V.F. Prokhanov, Ye.N. Pylayeva (Institute of Metallurgy, USSR Academy of Sciences) ~~Development of a Method for the Hot Compaction of Titanium and Titanium-Alloy Powders~~ 25

The purpose of this investigation was to develop a satisfactory method of hot-compacting titanium powder. The authors first attempted hot compaction with graphite compression molds, which, however, proved unsatisfactory because the titanium reacts with the graphite and the molds can be used only once. The authors therefore used a new complex nickel alloy [composition not given] developed at the Institute of Metallurgy at the USSR Academy of Sciences in 1953-54. This alloy is some 40-50 times stronger than pure Ti at 950-1000° C. The alloy can therefore be recommended as

Card 7/43

Titanium and Its Alloys (Cont.)

AB-1

a material for compression molds for hot compaction of powdered Ti, Be, Zr, Ni, Fe, Th, U, and other metals. Compression molds of the new alloy were made in the following shapes and sizes: 1) cylindrical, with 15-mm diameter, 20-mm height, and 15-g. weight; (2) cylindrical, with 45-mm diameter, 60-mm height, and approximately 400-g. weight; (3) rectangular, 6x6x60 mm, 10 g. in weight. These molds were designed by one of the authors (V.F. Prokhanov). A study was made of the effect of temperature, specific pressure, and duration of hot compaction on the density and hardness of the compact. Hot compaction of CaH<sub>2</sub>-reduced and Mg-reduced Ti was carried out at 800°, 850°, and 900° C, at a specific pressure of 15 kg/mm<sup>2</sup>, and for periods of 0.5 to 30 minutes. An investigation was also made of the hot compaction of Ti alloys containing 5 percent and 7.5 percent of Al. These tests were carried out at a temperature of 850° and at a specific pressure of 15 kg/mm<sup>2</sup> after preliminary sintering at 1000°. Conclusions. 1) The new heat-resistant nickel alloy may be used for making compression molds intended for hot compaction of metal powders at temperatures of 800-1000° C and at a specific pressure of 12-15 kg/mm<sup>2</sup>. 2) It was established that the theoretical density of Ti is achieved by hot compaction

Card 8/43

Titanium and Its Alloys (Cont.)

AB-1

with a specific pressure of 15 kg/mm<sup>2</sup> at 900° after 10 minutes, at 850° after 20 minutes, and at 800° after 30 minutes. 3) In the case of powdered titanium-aluminum alloys containing 5 percent and 7.5 percent of aluminum, hot compaction at 850° with a specific pressure of 15 kg/mm<sup>2</sup> for a period of 20 minutes is sufficient to obtain a density equal to 98 percent of the theoretical density of the alloys. 4) The proposed method of hot compaction may be used for other powdered metals (Zr, Be, Th, U, Fe, etc.) and for their alloys. There are 5 figures, 3 tables, and 10 references (8 English and 2 German).

GO/sfm  
6-18-59

Card 43/43

PROKHAZKA, Ladislav [Prachazka, Ladislav]

Remark on one of my articles. Chekhosl mat zhurnal 13 no.2:322-323 Je '63.

1. Matematicko-fysikalni fakulta, Karlova universita, Praha 2,  
Ke Karlovu 3.

MORDKOVICH, M.S.; BOBRAKOV, B.P.; PROKHAROVICH, L.Ye.

Efficiency of packaging tomato paste in large tin containers.  
Kons. i ov. prom. 15 no. 12:16-18 D '60. (MIRA 14:1)

1. Moldavskiy nauchno-issledovatel'skiy institut pishchevoy  
promyshlennosti.  
(Tomato products--Packaging) (Tin cans)



PROKHAYEV, G. V.,

"Temperature fields in structural foundations"

report to be submitted for the Intl. Conference on Permafrost, Purdue Univ.,  
Lafayette, Indiana, 11-15 Nov 63

PROKHAZKA, Ladislav [Prochazka, Ladislav]

Remark on the quasi-isomorphism of torsion free groups of finite rank. Chekhosl mat zhurnal 15 no.1:1-3 '65.

1. Faculty of Mathematics and Physics of the Charles University Prague 8, Sokolvska 83. Submitted May 11, 1962.

PROKHAZKA, Ladislav [Prochazka, Ladislav]

On homogenous Abelian groups without torsion. Chekhosl mat  
zhurnal 14 no. 2:171-202 '64.

1. Faculty of Mathematics and Physics, Charles University,  
Prague 8 - Karlin, Sokolovska 83.

PROCHAZKA, Miroslav, inz. CSc.

Electromagnetic light waves in telecommunication engineering.  
Slaboproudý obzor 25 no.6:313-319 Je '64.

1. A. S. Popov Research Institute of Telecommunication Engineering,  
Prague.